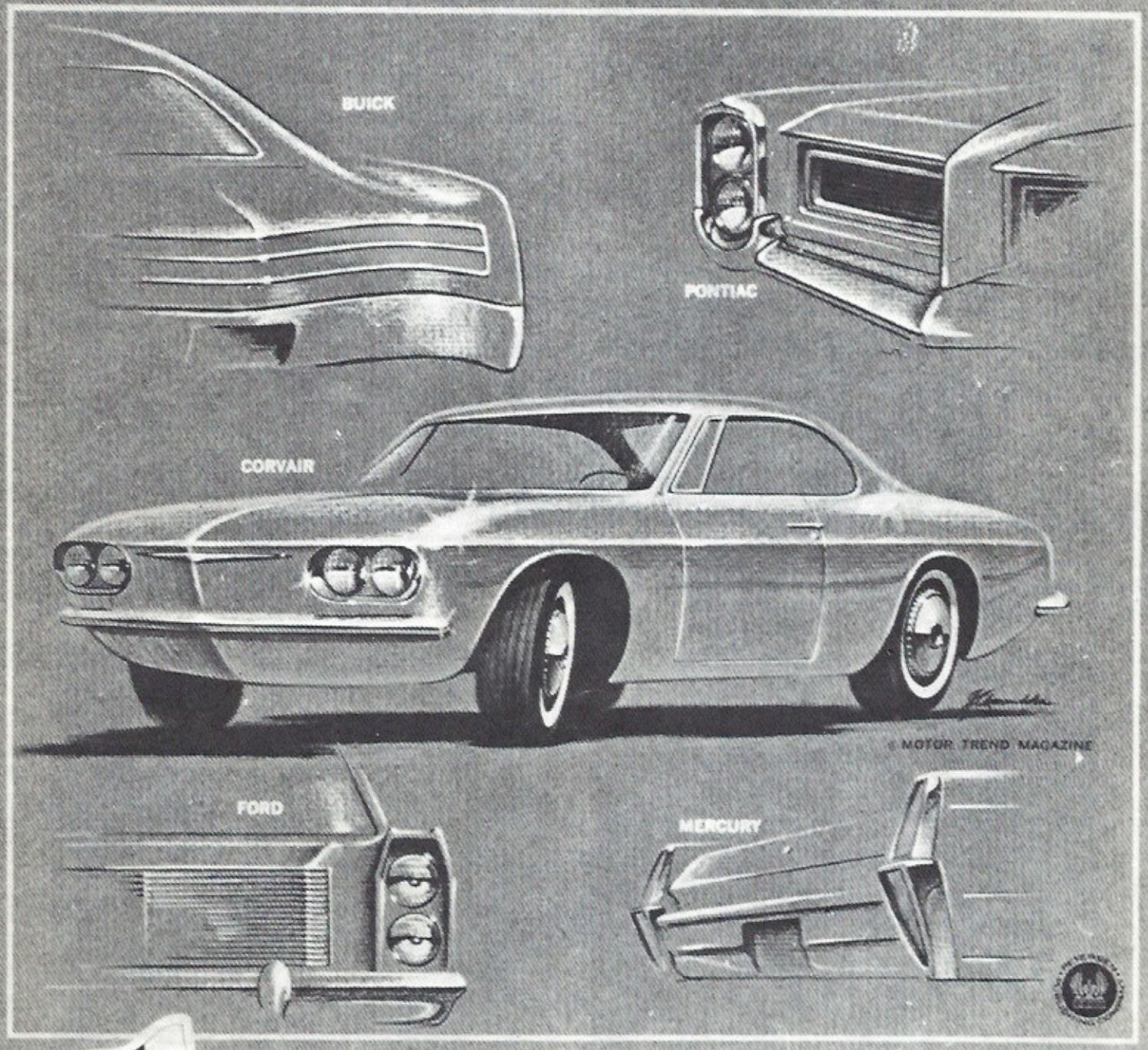
MOTOR TREND

FIRST 1965 CARS

AUGUST 1964 50c (60c IN CANADA)

WHAT THEY'LL LOOK LIKE - STYLING HIGHLIGHTS !



INDY 500

ROAD TESTS: MUSTANG, BARRACUDA, COMET CYCLONE, CANADIAN STUDEBAKER, DODGE 880, VOLKSWAGEN 1200

instant dyno

This kit for Corvairs was developed on a dynamometer, gives programmed power for tune-it-yourself owners

REPRINTED FROM AUGUST, 1964 **MOTOR TREND**

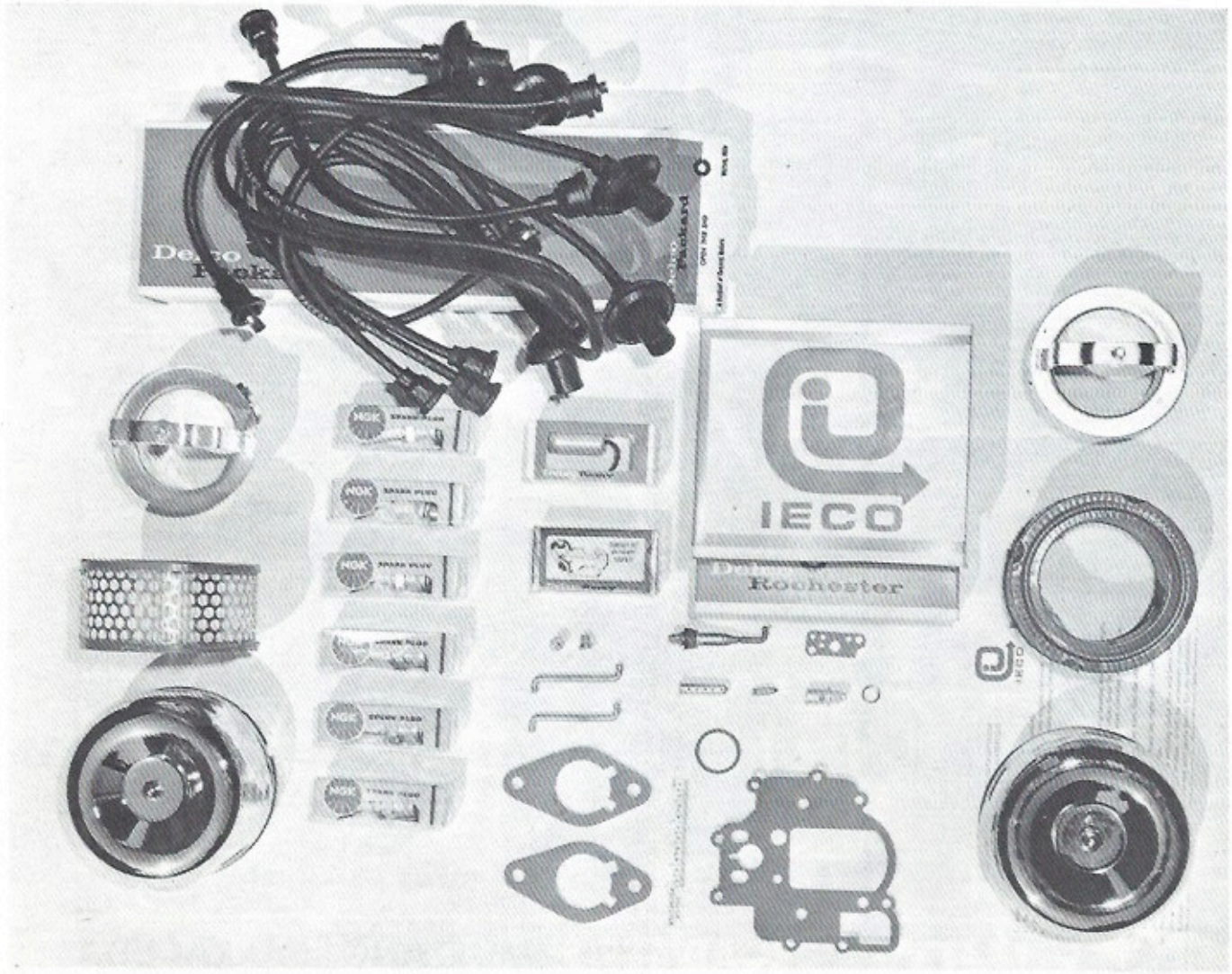
by Jim Wright, *Technical Editor*

TUNE-UPS ARE EXPENSIVE, and the results aren't always worth the cost. In many cases, mechanics merely put in replacement carburetor or ignition parts, make sure the settings conform to factory specifications, then hand over the car along with a sizable bill for parts and labor.

On the other hand, maybe you belong to that large group of motorists who like to do their own tuning. You can usually get a better job this way, and it's certainly cheaper. But here again, the results won't be so good as they should.

A professional tune-up—one that makes for maximum results—can be done in only one of two ways. The first involves a series of time- and money-consuming on-the-road tests to check the results of various ignition and carburetion settings. This method gives good results, but today's overcrowded streets and roads make it impractical.

The other way—and by far the best—involves using a chassis dynamometer. With this modern piece of equipment, a competent tune-up man can duplicate any road or load condition at any engine speed and can quickly and *correctly* tell which ignition or carburetion settings produce *maximum* efficiency.



DYNO-PAK PROVIDES ALL PARTS YOU NEED TO BRING CARBURETION AND IGNITION SYSTEMS TO PEAK PERFECTION FOR POWER, RELIABILITY.

This is fine, but what about motorists who happen to live where there's no dynamometer? Or how about do-it-yourselfers?

We recently checked out a new item that might be the answer. It's a complete tuning kit that promises the backyard tuner all the advantages and results of a professional dynamometer tune-up without getting anywhere near one. All you need are the kit, a couple of screwdrivers, and a wrench.

The Dyno-Pak is a development of Raoul (Sonny) Balcaen, youthful president of IECO, a research, development, manufacturing, and sales firm specializing in speed, sport, and reliability items for Corvairs. One of Balcaen's most successful inventions, a four-barrel ram intake manifold for the Corvair, was the subject of a test report in the June, 1962, MOTOR TREND.

This Dyno-Pak kit is actually a by-product of IECO's extensive development work with Corvairs, stock and otherwise. Every change that IECO has found will increase performance or add to the reliability of the stock Corvair engine has been included in the kit.

To check this claim, we borrowed a stock Corvair and ran it through a series of tests. The subject car was a '63 convertible with 102-hp engine, four-speed transmission, and 3.55-to-1 rear axle. The odometer showed 18,000 miles.

Before we touched the car, we took it to a local, reputable Chevrolet dealer for a complete tune-up, which included new plugs, points, condenser, plus a carburetor boil-out and rebuild. All settings were brought to factory specifications.

We then took the test car to Bob's Dyno Shop in Santa Monica, California, to check out the results. Maximum road horsepower available at the rear wheels was found to be 47 on the Maxwell dyno. This is above the standard average horsepower rating for this engine, so we knew the dealer's shop had done a good job. The Maxwell dyno also registers a car's acceleration rate, which in this case was 20. This figure represents the car's ability or willingness to wind out.

After the dyno tests, we gave the car a 100-mile road test to check through-the-gears acceleration times and gas consumption. The car felt good and pulled well. The 0-30-, -45-, and -60-mph times were 4.5, 7.7, and 14.9 seconds. Quarter-mile average was 20.8 seconds and 70 mph. The 100 miles of mixed driving gave an average fuel consumption figure of 19.6 mpg.

After this phase, we took the car back to IECO's shop, where the Dyno-Pak was installed. This entailed both ignition and carburetion changes. The stock graphite-impregnated nylon spark plug wiring was replaced with Delco-Packard 440 wiring. Colder-range NGK plugs replaced the stock ACs. The distributor got new points and condenser, and the advance curve was modified, using simple-to-install parts included in the pack. Ignition timing was reset to IECO's specifications. This last detail is most easily done with a timing light, but the kit instructions tell how it can easily be done without one.

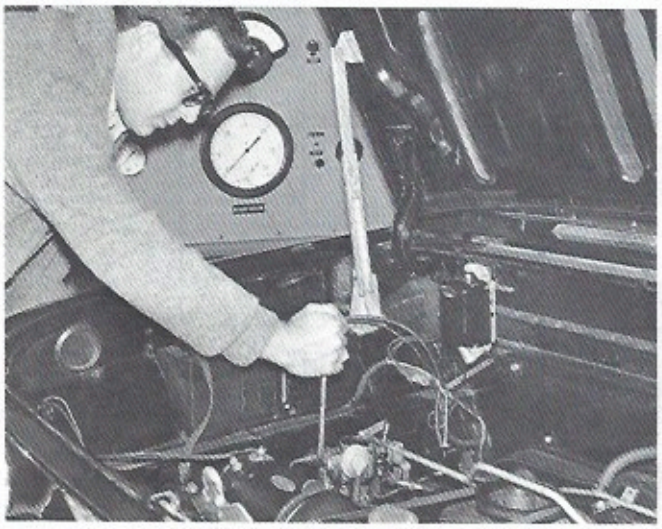
The stock dual carburetors also came in for their share of modifications. IECO re-jetted them for maximum power, then replaced the accelerator pump rods with units modified to give smoother acceleration and eliminate the tendency (that stock Corvairs have) to load up slightly when under full throttle at intermediate speeds. The stock acceleration pumps were replaced with ones that use long-wearing neoprene (instead of leather) for the pump seals. Neoprene float needles and seats were also installed instead of the stock metal-to-metal needles and seats. The float level was set to IECO's specifications by using a gauge included in the Dyno-Pak. The stock air cleaner was replaced with individual, chromed units with dry-pack paper filter elements. The whole job took an hour, and the only tools used were screwdrivers and wrenches.

We then took the test car back to the dynamometer shop to check results. Road horsepower had gone from 47 to 54, which represents a 15 per cent increase. Acceleration rate was up from 20 to 27—a 35 per cent increase. After another 100-mile workout, acceleration times checked out at 4.0, 7.1, and 13.8 for the 0-30-, -45-, and -60-mph speeds. Quarter-mile ET dropped to 19 seconds flat, and trap speed increased to 74 mph. Overall fuel consumption showed an improvement of 1.9 mpg.

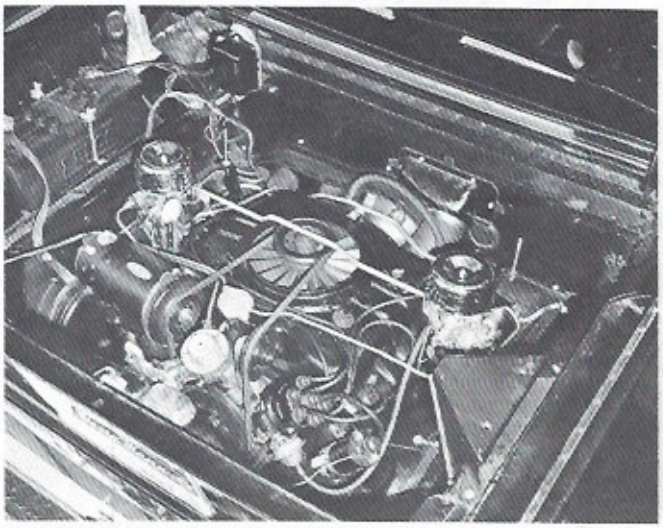
The Dyno-Pak includes all the above-mentioned parts necessary to make the modifications, plus an easy-to-follow, detailed instruction sheet. Also included are various tuning tips (such as how to adjust the valves for maximum efficiency) that the developers have found add to the Corvair's performance.

With the exception of the NGK plugs, all other parts in the kit are either Delco or Rochester. All parts were chosen for quality, performance, and reliability rather than for cost. The Dyno-Pak lists for $29.95, which is slightly less than the parts would cost if bought individually. Considering the results of the dyno-developed combination, it's not a bad price.

At present, IECO offers the kit for Corvairs only, but they plan to make them for all cars. For further information, write IECO, Box 25142, Los Angeles, California, 90025. /MT



All you need to install the Dyno-Pak are screwdrivers and common wrenches—no test instruments or gauges. Test Corvair was tuned by enterprising developer of kit, Raoul (Sonny) Balcaen.



The big changes can't be seen, but you can feel them every time you hit the throttle. Only outside differences to be noticed are individual, chromed air cleaners and Packard wiring.

IECO

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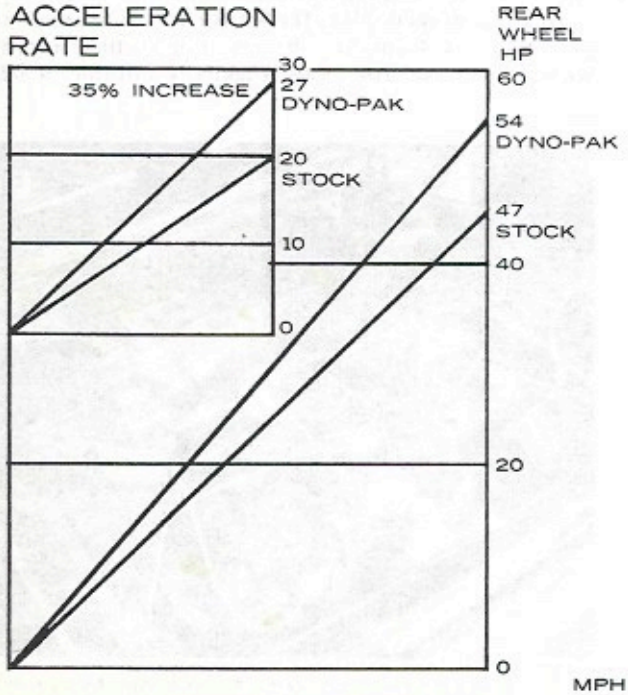
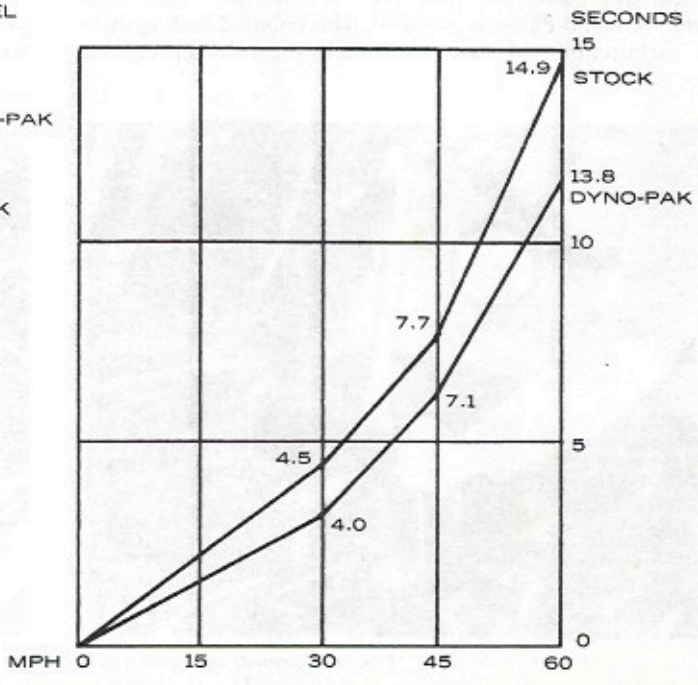


HORSEPOWER CURVE



SPEED CURVE